Learning Strategies: An Overview

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This essay attempts to define learning strategies, to provide a theoretical overview, and finally, to examine current research on the topic.

Learning Strategies: Towards a Definition

There is a plethora of different theoretical models attempting to define and categorize learning strategies. All of these models view learning strategies as a set of cognitive processes used by learners during the process of second language acquisition. These cognitive processes facilitate the comprehension and use of novel linguistic stimuli. Beyond this point, however, most models differ in their theoretical background and their use or avoidance of a wide array of research tools.

Learning Strategies: A Theoretical Overview

One of the first attempts to define and explicate the notion of learning strategies was by Brown (1980). He tries to base his analysis of learning strategies on the theoretical models of Robert Gagne and John Dewey. Brown considers learning strategies to be just one element of the complex cognitive process called human learning. His analysis borrows heavily from Robert Gagne's theory of human learning. Gagne (1965) proposed the existence of eight successive kinds of learning. The most basic one is signal learning which is nothing more than a simple reaction to a simple stimulus and is equivalent to the classical conditioning-response discovered by the Russian psychologist Ivan Petrovich Pavlov. On the other end of the scale is problem solving, a set of complicated mental activities

whereby already learned concepts and previously acquired cognitive thinking skills are used in tandem to solve and explain novel sensory information. According to Brown, during the process of second language acquisition learners are constantly confronted with unknown material and they must resort to problem-solving thought processes in order to tackle the linguistic riddles facing them. These problem-solving tactics are commonly referred to as learning strategies. In order to explain problem solving, Brown uses John Dewey's analysis (1910). Dewey saw problem solving as a five-stage process:

1. A condition of perplexity and confusion when an unknown stimulus presents itself.
2. An analysis of the problem and the relevant parameters that gave rise to it.
3. An effort to fit the problem with the problem solver's cognitive structure.
4. A successive testing of a series of alternative hypotheses in order to solve the problem.
5. When a solution is found, learners include it in their cognitive structure. From then on, learners will use this information whenever a similar situation arises.

Brown claims that the above cognitive process takes place whenever a foreign language learner is confronted by a new piece of unknown information and then proceeds to propose four different kinds of learning strategies which occur during the problem-solving activity.

The first two strategies are *transfer* and *interference*. Transfer occurs when a speaker applies old, tested knowledge to a new learning situation. Transfer can be positive when the previously known information helps the learning process because it is relevant to the task at hand. But when known facts cannot be applied to the problem-solving situation, their use actually

hinders any effort towards solving the problem and the information transfer is negative. Under such circumstances, transfer is called *interference*. Interference has been singled out as a very important problem during second language acquisition. The learner employs learning strategies involving the use of previously acquired linguistic knowledge, which often comes from the learner's native language. However, the linguistic rules of the native language often conflict with the rules of the second language and as a result the learner may come to the wrong conclusions.

The next two learning strategies are *generalization* and *simplification*. Generalization occurs when a learner examines a set of linguistic stimuli and reaches a conclusion or discovers a law which can be applied to all of them. Furthermore, generalization can be subdivided into two categories of thinking: inductive and deductive reasoning.

Inductive reasoning occurs mostly during the early stages of learning or during learning in a natural setting. The learner is confronted with a series of novel linguistic instances, and from the multitude of the parts, the learner derives a set of general, all-encompassing laws which explain the behavior of the parts. Deductive reasoning occurs in the later stages of learning when students have already acquired a set of rules explaining the new language or in classroom environments where students are directly taught the target language rules. From such rules, students infer the behavior of a particular linguistic phenomenon.

Simplification is very similar to generalization. It is the process of removing extraneous information by reducing the

characteristics of complex linguistic events in order to make them more easily comprehensible. At that point, the remaining events can correspond to and fit with our existing limited knowledge of a second language.

One mistake often made by young learners is *overgeneralization*. This occurs when a given rule is applied without restrictions, a phenomenon which often leads to mistakes. For instance, young children use the past tense *-ed* ending even for irregular verbs. , Overgeneralization usually disappears when learners gradually become aware of the intricacies of the target language.

While the above four strategies refer to both the stage of learning and to the stage of attempting to communicate in a second language, there is another strategy which is unique to the communication process. This is the strategy of *avoidance*. When learners feel insecure with their knowledge of a second language they may decide to use simplified expressions they feel more comfortable with, or in extreme cases, they may decide to completely avoid communicating in the second language. This attitude also affects the learning process because speakers who avoid interacting in the second language do not improve their communication skills.

Brown's analysis of learning strategies is a very good attempt at categorization, but it suffers from a lack of substantiating research data. His observations seem intuitively correct, but without supporting evidence they can be taken only as possible indications. Furthermore, they are very general and there is no attempt to explain how learning strategies affect

second language acquisition in a more specific and thorough manner.

The 1980s saw a resurgence of interest on the issue of learning strategies. Tarone (1980) subdivided strategies into three categories: production, communication and learning. A production strategy occurs when a learner attempts to use his existing linguistic knowledge to produce accurate, effortless results in the second language. Simplification, rehearsal and discourse planning are all production strategies. Communication strategies are used when one attempts to communicate in the target language. Finally, language-learning strategies, like memorization, initiation of conversation, and inferencing, help learners acquire second language competence.

To further complicate matters, another distinction was proposed by Cohen (1990), who differentiated between language-learning strategies and skill-learning strategies. The first kind of strategy is used when learners try to understand new linguistic stimuli and to place them within the wider sociolinguistic context of the target language. The second kind of strategy refers to the set of mental techniques used by learners in their efforts to master the four language skills: listening, speaking, writing and reading.

Ellis (1996) points out a number of ambiguities and inconsistencies that have hindered most efforts towards a detailed analysis of the topic. For instance, some researchers consider learning strategies to be a set of behavioral tactics, while other researchers see them as cognitive traits. The former define strategies as behaviors used by learners during the

second language acquisition process while the latter claim that learning strategies consist of both behaviors and thoughts.

There is also disagreement concerning the difference between strategies and techniques. Stern (1983) differentiates between general tendencies during the learning process, which he calls strategies, and specific methods used, which he calls techniques. It should be noted that this distinction is not followed by all theorists.

Another point of discord is whether learning strategies take place on an unconscious or conscious level. If they occur automatically whenever a learning task presents itself then they do not appear intentionally. However, if the learner makes an intentional mental effort to use the learning strategies, then they occur only when the learner consciously wishes to use them.

Furthermore, some researchers view learning strategies as a set of mental phenomena that have a direct effect on learning; for instance, memorization techniques help learners to acquire new vocabulary or to remember grammar rules. Other researchers disagree with this point and postulate that learning strategies help learners indirectly by providing them with information about the target language in order to comprehend it.

Ellis (1996) attempts to find some common elements in all of these often conflicting theories. He identifies eight characteristics which are accepted by most analysts:

1. A learning strategy can be either a general approach or a specific technique.

2. Learners use learning strategies on an ad-hoc basis in order to solve specific linguistic problems.

3. Learners can usually identify the type of learning strategies they employ if they are asked to.

4. Learning strategies may require the use of both linguistic and nonlinguistic behavior.

5. Learning strategies take place both in L1 and L2.

6. A learning strategy can be either behavioral or cognitive oriented.

7. Strategies can directly and indirectly help the learning process.

8. The use of specific strategies is highly variable and depends on both the learner and the specific linguistic task at hand.

A more systematic effort to define strategies was undertaken by O'Malley and Chamot (1990). They use Anderson's (1980) model of learning as a background explanatory model. Anderson divides the learning process into three stages:

1. The cognitive stage when the learner consciously tries to solve linguistic riddles.

2. The associative stage, when the learner acquires a more solid knowledge of the rules of the second language.

3. The automatic stage when the learner uses the second language without thinking of the rules accompanying it.

Although some theories claim that learning strategies occur only during the early stages of learning in an intentional and direct manner, O'Malley and Chamot hold that learning strategies take place even during the later stages of the learning process albeit as an internalized, automatic, and unconscious mental process.

In conclusion, one must note the lack of agreement among researchers about the main characteristics of learning strategies. However, this is a new field of inquiry, and many theorists have recently shown much interest on this topic. It is expected that further research will narrow the existing theoretical differences and will provide more supporting

quantitative data. Unfortunately, most current analytical efforts are qualitative in nature and thus are difficult to prove or disprove since they defy quantitative testing.

Recent Research: The Methodological Background

Researchers have attempted to examine learning strategies using a variety of research techniques. Those who follow the techniques of behavioral psychology have attempted to draw conclusions based on direct observations of students during the learning process. Unfortunately, this methodological approach suffers from a serious defect; it ignores the cognitive processes taking place in the minds of the students. Nevertheless, such studies have been successfully used to gauge the strategies of young children because young children's behavior often accurately reflects their mental state.

Other researchers have chosen to conduct interviews and structured questionnaires. These techniques rely on retrospective reports by students which ask students to name and explain in detail the techniques they use. Using questionnaires, Rubin (1981) succeeded in producing detailed lists of general and task-specific strategies. But, as he notes, one problem with this method is the inability of many students to effectively report their mental processes during second language acquisition. Some researchers had to explain to the students how to use the questionnaires, and this may have affected their choice of answers. A similar methodological technique involves the use of diaries, but usually it yields interesting information about the students emotional state during the second language acquisition process rather than their cognitive mental activities.

A more successful activity is the use of think-aloud tasks. Mangubhai (1991) asked learners to talk about their strategies when the learners were trying to solve a linguistic problem. The problem with this approach is that some students cannot use a learning strategy and talk about it at the same time. A way to alleviate this problem is to put students in pairs and ask them to talk to each other about the strategies they have just used.

It seems that no particular research methodology is perfect nor will the most reliable data come from the use of a combination of research techniques. The current trend points towards this direction, but this raises another problem. Quite often, different techniques identify different learning strategies, so it is difficult to combine and compare the results.

Recent Research: An Overview

The two most popular kinds of studies on learning strategies are cross-sectional and correlational. The cross-sectional studies try to identify successful learning strategies by asking good students to name and explain in detail the learning strategies they use to master the new language. Also, good students may be compared with bad students in order to identify the strategies that lead to successful learning. After examining the findings of the latest studies on the subject, Ellis (1995) identified five language strategies that seem to be used by successful students: (a) An attention to the form of the target language; (b) An effort to communicate in the target language; (c) A positive active approach to language problems; (d) Knowledge of what the learning process involves; and (e) A

flexible, ad-hoc attitude towards the use of specific strategies for a given task.

The second kind of research studies, the correlational type, attempt to find if there is a relationship between certain learning strategies and the learners' performance as measured by various tests. Most researchers who have tried to statistically measure the relationship between learning strategies and performance have not been very successful in drawing conclusive results. A more promising study was undertaken by Mangubhai (1991) who identified a set of learning strategies employed by students studying Hindi using the Total Physical Response method. Mangubhai found that the good students knew more memorization techniques, could comprehend whole chunks of novel linguistic information, and concentrated more on the form of second language commands once they had mastered the meaning.

The study of vocabulary-learning strategies has also yielded promising results. Cohen and Aphek (1981), found that when the subjects were able to form associations between new words and their existing L1 linguistic repertoire they were able to remember the new words better.

In another research by Brown and Perry (1991), it was shown that learners may employ three different techniques when they memorize a new work: (a) the *keyword technique*--the pairing of the new work with a similarly sounding known word, (b) the *semantic technique*--the inclusion of the new word in the semantic structure the learner already possesses, and (c) the *keyword-semantic technique*--the combination of both techniques. The researchers suggested that the keyword-semantic technique is

the most effective one, and the research findings corroborated their hypothesis.

The learning strategies of children were examined by Chesterfield and Chesterfield (1985) who found that children use different strategies during different stages of acquiring a second language. Children rely more on repetition and memorization during the early stages. Later on they use more social interactive strategies, and in the final stages of language learning children rely on metacognitive strategies such as monitoring their linguistic comprehension and performance in the target language.

The findings of the above research studies, although often inconclusive and too general in their scope, point towards a more refined and detailed understanding of the research matter. They are the foundation upon which future research endeavors will be undertaken.

Conclusion

The study of learning strategies is still in its infancy. Although some general attributes of learning strategies are known, theorists have been unable to agree upon an all-encompassing definition of what constitutes a learning strategy. Efforts towards a detailed analysis of specific strategies have also been inconclusive. It is hoped that future studies employing better methodological tools will produce more accurate results.

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